

ABSTRACT OF THE DISCLOSURE

A substrate processing apparatus for processing substrates prevents the substrates from contaminating as they are transferred. The apparatus includes a container, like a FOUP, for containing substrates, at least one processing chamber where the substrates are processed, a substrate transferring module including a substrate transfer chamber and at least one load port for supporting a container, and a contamination controlling system for the substrate transfer chamber. The contamination controlling system includes a purge gas supply inlet connected to the substrate transfer chamber, and a gas circulating tube for recycling the purging gas to circulate through the chamber. The substrate transfer chamber is purged using the purging gas to remove moisture and contaminating materials from the substrate transfer chamber. The formation of particles on the substrate otherwise caused by a reaction between the moisture and contaminating materials while the substrate is standing by in the container can be prevented.